PLATFORM

CARBOGREEN

SILKIER. SIMPLER. GREENER.

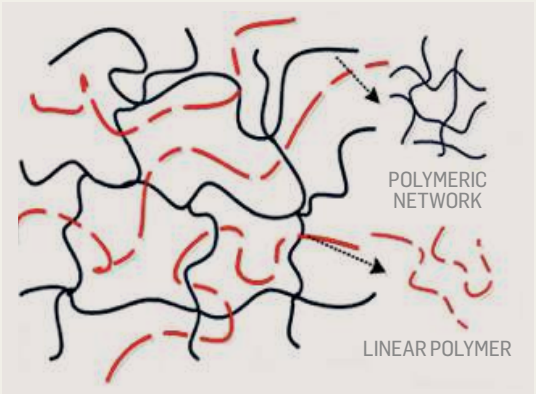
ASSESSA

INNOVATION FOR A GREENER WORLD

CARBOGREEN PLATFORM FOR THE NEW GENERATION OF COSMETICS

The products of the Carbogreen platform form stable hydrogels capable to retain large amounts of water and biological fluids that increases the viscosity of cosmetic formulas with a unique texture.

CARBOGREEN LINE is based on an exclusive technological platform developed by ASSESSA that allows the formation of Interpenetrating Polymer Networks (IPNs) using polysaccharides from botanical origin. The IPN technology creates a network of biopolymers organized around a support structure formed by different polysaccharides with a suitable tertiary structure. The polysaccharides are cross-linked across the scaffold, forming a complex superstructure, as seen in the following scheme.



KEY BENEFITS

NATURAL

CARBOGREEN E.I PW is made of 100% natural biopolymers from botanical sources.

SUSTAINABLE

Materials used in CARBOGREEN are biodegradable and come from sustainable sources.

SAFE

CARBOGREEN is neutral and does not require neutralizers such as MIPA. CARBOGREEN is 100% AMINE-FREE

COMPLIANCE

CARBOGREEN is Reach and China compliant.

STABLE

Emulsions and water solutions formulated with CARBOGREEN are stable over a wide pH range (from 4 to 9) and in the presence of electrolytes.

SIMPLE TO USE

CARBOGREEN does not require expensive high-shear stirrers and does not form lumps in the solution.

CARBOGREEN E.A

Approved by ECOCERT RAW MATERIAL

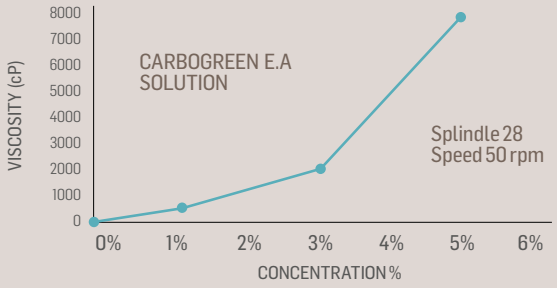
VELVETY SENSORY

Rapidly absorbed by the skin, leaving it with a unique dry/velvety afterfeel.

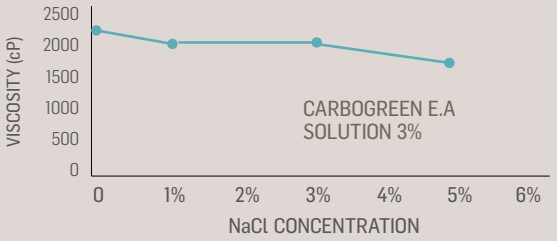
- **CREAMY AND NOURISHING TEXTURE.**
- **SUPERIOR SPREADABILITY**
- **LOW VISCOSITY**

Co-emulsifier, tack-free texture, **immediate perception of nutritious hydration,** without imparting a greasy feel on the skin surface. **Superior spreadability,** ideal for **low viscosity** products.

VISCOSITY (BROOKFIELD)

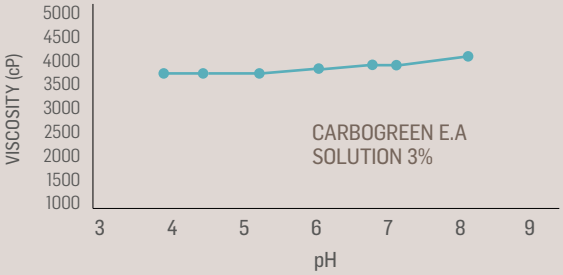


STABILITY IN THE PRESENCE OF ELECTROLYTES



The viscosity of a 3% solution of CARBOGREEN E.A in water remains stable in the presence of electrolytes after an initial decrease.

STABILITY x pH



CARBOGREEN E.A water solutions (3%) are stable in a wide pH range, thus allowing formulators to use the product in different formula types.

PERFORMANCE

FORMS O/W EMULSIONS

CARBOGREEN E.A forms liquid crystal structures in O/W emulsions, increasing emulsion stability and improving skin compatibility. A picture of a O/W emulsion with 8% sunflower oil in water with 5% CARBOGREEN E.A shows the formation of the liquid crystals in a stable emulsion.

USAGE LEVELS

PRODUCT	%
SERUM	**0.5 to 1.0**
NIGHT CREAM	**1.5 to 3.0**
NUTRITIVE CREAM	**1.5 to 3.0**
FACE MASK	**2.0 to 4.0**

INCI NAME

Zea Mays (Corn) Starch (and) Cyamopsis Tetragonoloba (Guar) Gum (and) Sodium Carrageenan

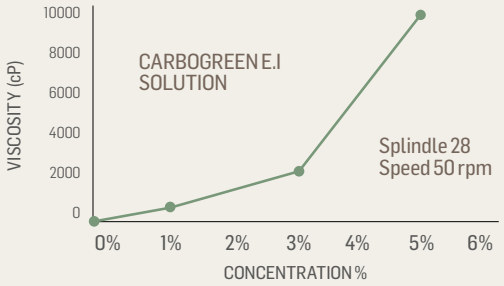
CARBOGREEN E.I

Rapidly absorbed by the skin, leaving it with a unique dry/satiny touch.

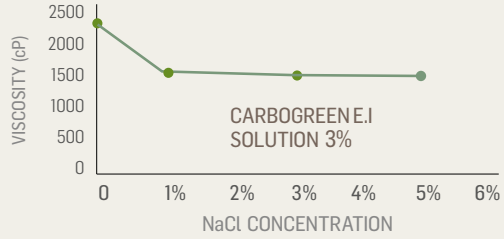
- **LIGHT TEXTURE**
- **SUPERIOR SPREADABILITY**
- **LOW VISCOSITY**

Co-emulsifier, tack-free texture, **immediate sensation of softness** with rapid absorption by the skin, without imparting a greasy feel. **Superior spreadability** ideal for **low viscosity** products, such as light emulsions.

VISCOSITY (BROOKFIELD)

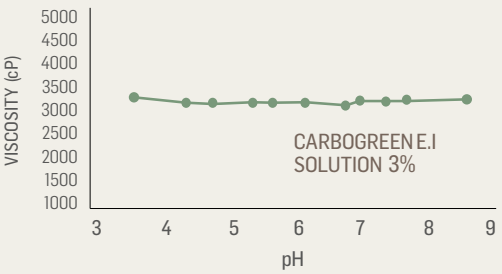


STABILITY IN THE PRESENCE OF ELECTROLYTES



The viscosity of a 3% solution of CARBOGREEN E.I in water remains stable in the presence of electrolytes after an initial decrease.

STABILITY x pH



CARBOGREEN E.I water solutions (3%) are stable in a wide pH range, thus allowing formulators to use the product in different formula types.

CARBOGREEN E.O

Rapidly absorbed by the skin, imparts a unique dry/soft afterfeel.

PERFORMANCE

FORMS
O/W EMULSIONS

CARBOGREEN E.I forms liquid crystal structures in O/W emulsions, increasing emulsion stability and improving skin compatibility. A picture of a O/W emulsion with 8% sunflower oil in water with 5% CARBOGREEN E.I shows the formation of the liquid crystals in a stable emulsion.

USAGE LEVELS

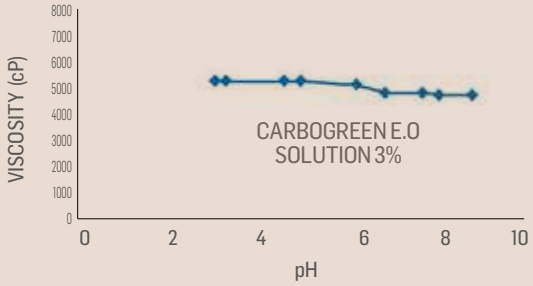
PRODUCT	%
SERUM	0.5 to 1.0
LIGHT EMULSION	1.5 to 2.5
BODY LOTION	1.5 to 3.0
BODY CREAM	2.0 to 4.0

INCI NAME
Oryza Sativa Rice Starch (and) Cyamopsis Tetragonoloba (Guar) Gum (and) Algin

• SUSPENDING AGENT
• HIGHT VISCOSITY

Co-emulsifier, tack-free texture, **forms stable suspensions of pigment such as mica and titanium dioxide** without imparting a greasy feel on the skin surface. Ideal for **high viscosity** products.

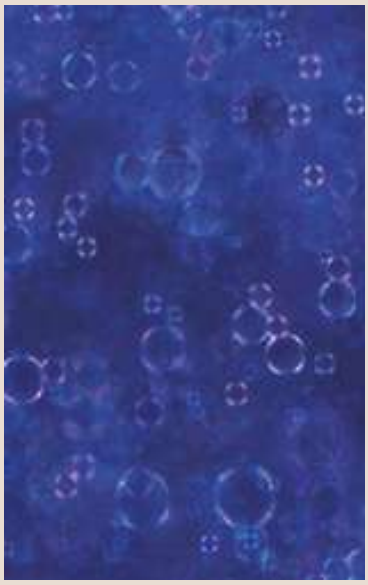
STABILITY x pH



SUSPENDING AGENT

CARBOGREEN E.O forms stable suspensions with pigment such as mica / titanium dioxide and clays.

PERFORMANCE



FORMS
O/W EMULSION

CARBOGREEN E.O forms liquid crystal structures in O/W emulsions, increasing emulsion stability and improving skin compatibility.A picture of a O/W emulsion with 8% sunflower oil in water with 5% CARBOGREEN E.O shows the formation of the liquid crystals in a stable emulsion.

USAGE LEVELS

PRODUCT	%
SERUM	0.5 to 1.0
NIGHT CREAM	1.5 to 3.0
NUTRITIVE CREAM	1.5 to 3.0
FACE MASK	2.0 to 4.0

INCI NAME
Oryza Sativa Rice Starch (and) Tapioca Starch (and) Cyamopsis Tetragonoloba (Guar) Gum (and) Algin

Approved by ECOCERT RAW MATERIAL

CARBOGREEN Q.B

FOR SKIN AND HAIR

100% NATURAL BIOPOLYMERS FROM BOTANICAL ORIGIN

USAGE LEVELS

HAIR

PRODUCT	%
SERUM	0.5 to 1.0
CONDITIONER	1.5 to 3.0
HAIR MASK	2.0 to 5.0
LEAVE ON	2.0 to 4.0

SKIN

PRODUCT	%
SERUM	0.5 to 1.5
NIGHT CREAM	1.5 to 3.0
LIGHT LOTION	1.0 to a 2.5
FACE MASK	2.0 to 4.0

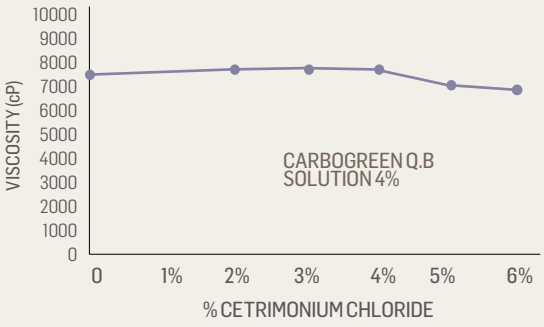
INCI NAME

Zea Mays (Corn) Starch (and) Caesalpinia Spinosa Gum (and) Algin

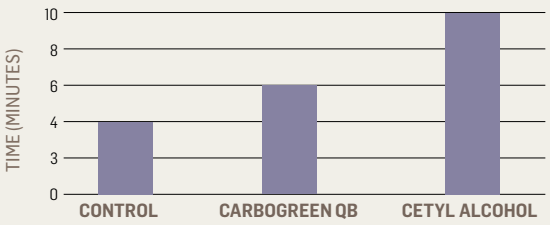
HAIR

CARBOGREEN Q.B is rich with film-forming agents that protect the lipid layer of the hair and keep the moisture balance inside the hair fiber. CARBOGREEN Q.B is an excellent texturizer for formulas with high loads of quaternary ammonium salts, allowing the reduction/elimination of fatty alcohols in the formula, eliminating the "waxy" feel of the hair and reducing the build-up in the formulas.

VISCOSITY x CONCENTRATION OF QUATERNARY AMMONIUM SALT



REDUCTION OF HAIR DRYING TIME



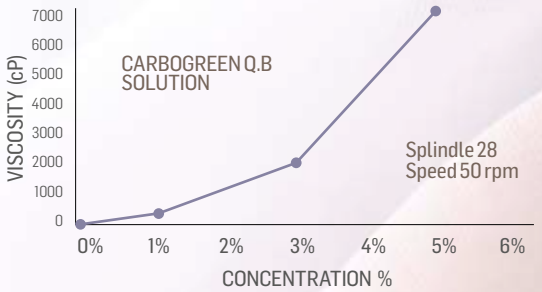
The formulation with CARBOGREEN Q.B reduces hair drying time by almost 50%.

SKIN

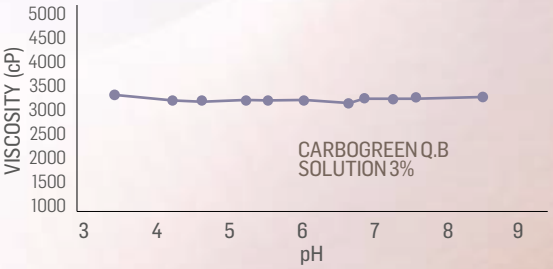
- **DRY AND VELVETY SENSORY**
- **CREAMY AND LIGHT TEXTURE**
- **SUPERIOR SPREADABILITY**
- **LOW VISCOSITY**

Rapidly absorbed by the skin, leaving it with a unique dry/velvety touch. Co-emulsifier, tack-free texture, allows the **reduction or even elimination of silicone** in formulas (silicone-free). **Superior spreadability,** ideal for **low viscosity** products.

VISCOSITY (BROOKFIELD)



STABILITY x pH



CARBOGREEN Q.B water solutions (3%) are stable in a wide pH range.

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